

<b>Title of Change:</b>	Datasheet correction for FGH4L50T65MQDC50 for Figure18&19 transient thermal impedance														
<b>Effective date:</b>	07 Aug 2025														
<b>Contact information:</b>	Contact your local onsemi Sales Office														
<b>Type of notification:</b>	This Product Bulletin is for notification purposes only. onsemi will proceed with implementation of this change upon publication of this Product Bulletin.														
<b>Change Category:</b>	Datasheet correction														
<b>Change Sub-Category(s):</b>	Datasheet/Product Doc change														
<b>Sites Affected:</b>															
<b>onsemi Sites</b>	<b>External Foundry/Subcon Sites</b>														
None	None														
<b>Description and Purpose:</b>															
To correct the thermal impedances table for $r_i$ [K/W] and $\tau$ [s] of IGBT & Diode as below. The change will not impact form, fit, or function of product.															
<b>Current:</b>	<b>FGH4L50T65MQDC50</b>														
<b>TYPICAL CHARACTERISTICS</b>															
<p>Y-axis: <math>Z_{0JC}</math>, THERMAL RESPONSE (K/W)</p> <p>X-axis: RECTANGULAR PULSE DURATION (sec)</p> <p>Inset Diagram:</p> <ul style="list-style-type: none"> <li>Pulse Train: <math>P_{DM}</math> (Period), <math>t_1</math> (On-time), <math>t_2</math> (Off-time)</li> <li>Equivalent Circuit: <math>R_1</math> and <math>R_2</math> in series, with <math>C_1 = t_1/R_1</math> and <math>C_2 = t_2/R_2</math></li> <li>Equation: Duty Factor, <math>D = t_1/t_2</math></li> <li>Equation: Peak <math>T_J = P_{DM} \times Z_{0JC} + T_C</math></li> </ul> <table border="1"> <thead> <tr> <th>i:</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td><math>r_i</math> [K/W]:</td> <td>0.0111</td> <td>0.0951</td> <td>0.0879</td> <td>0.1143</td> </tr> <tr> <td><math>\tau</math> [s]:</td> <td>1.09E-05</td> <td>8.96E-05</td> <td>5.78E-05</td> <td>2.801E-03</td> </tr> </tbody> </table>			i:	1	2	3	4	$r_i$ [K/W]:	0.0111	0.0951	0.0879	0.1143	$\tau$ [s]:	1.09E-05	8.96E-05
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Figure 18. Transient Thermal Impedance of IGBT															
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New:

### FGH4L50T65MQDC50

#### TYPICAL CHARACTERISTICS

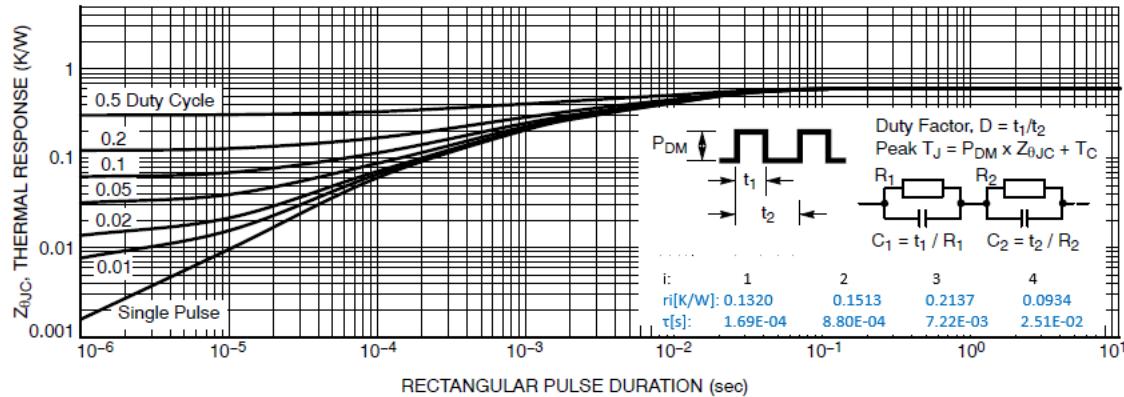


Figure 18. Transient Thermal Impedance of IGBT

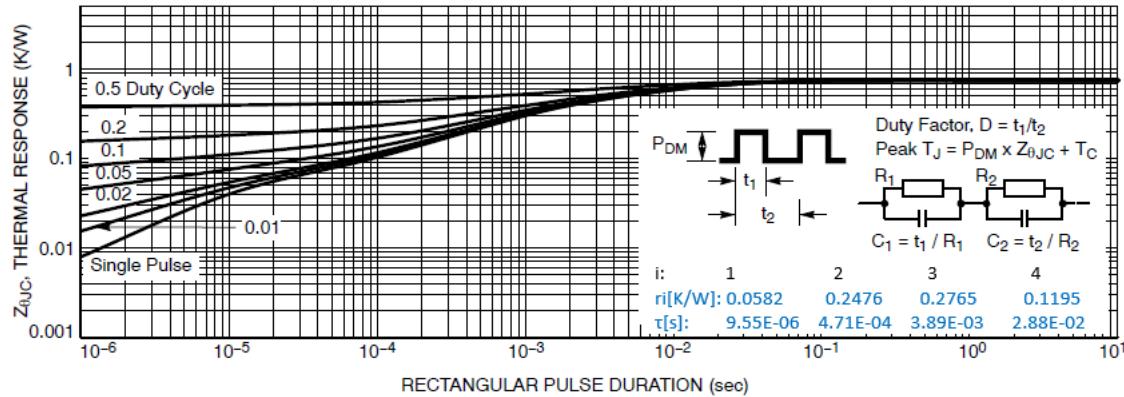


Figure 19. Transient Thermal Impedance of Diode

#### List of Affected Standard Parts:

**Note:** Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [PCN Customized Portal](#).

FGH4L50T65MQDC50	
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